CLAIMS

1. A contactor apparatus for acquiring electrical conduction to a plurality of semiconductor devices formed on a semiconductor wafer, comprising:

a first contactor having contacts directly contacting terminals of a first system of said semiconductor devices; and

a second contactor having contacts to be electrically connected to terminals of a second system of said semiconductor devices, said second contactor movable relative to said first contactor and having a separate path electrically independent from said first contactor.

2. The contactor apparatus as claimed in claim 1, comprising a moving mechanism for sequentially moving said second contactor to positions corresponding to the plurality of semiconductor devices.

3. The contactor apparatus as claimed in claim 1, wherein said first contactor is a membrane contactor.

4. The contactor apparatus as claimed in any one of claims 1 to 3, wherein said first contactor has openings, and portions provided with the contacts of said second contactor are brought into contact with the terminals of the second system of said semiconductor devices through said openings.

5. The contactor apparatus as claimed in any one of claims 1 to 3, wherein said first contactor has extending contacts extending from a surface of said first contactor facing said second

contactor to a surface of said first contactor facing said semiconductor device, and the contacts of said second contactor is electrically connected to the terminals of the second system of said semiconductor devices by contacting said extending contacts.

6. The contactor apparatus as claimed in claim 5, further comprising a suction mechanism for attracting said first contactor toward said semiconductor wafer.

7. The contactor apparatus as claimed in claim 6, wherein said suction mechanism comprises:

a cassette to which said semiconductor wafer is attached;

an elastic seal member provided to said cassette; and

a suction passage connected to a space defined by said cassette, said first contactor and said elastic seal member,

wherein said semiconductor wafer is located in said space.

8. The contactor apparatus as claimed in any one of claims 1 to 3, comprising an elastic member located on a surface of said first contactor opposite to a surface facing said semiconductor wafer so as to apply a pressing force to said first contactor through said elastic member.

9. The contactor apparatus as claimed in claim 5, comprising a sheet having an anisotropic conductivity and located on a surface of said first contactor opposite to a surface facing said semiconductor wafer, wherein said contacts is brought into contact with said contacts by pressing

the contacts of said second contactor against said extending contacts.

10. The contactor apparatus as claimed in claim 1, wherein projection electrodes are formed on the terminals of the first system of said semiconductor wafer and terminals of the second system, and the contacts of said first contactor have concave surfaces corresponding to a shape of said projection electrodes so that the concave surfaces are brought into contact with said projection electrodes.

11. The contactor apparatus as claimed in claim 5, wherein the extending contacts of said first contactor have concave portions which are brought into contact with the contacts of said second contact.

12. The contactor apparatus as claimed in any one of claims 1 to 3, comprising temperature control means for controlling a temperature of said semiconductor wafer.

13. The contactor apparatus as claimed in claim 12, wherein said temperature control means includes a fluid passage provided to said second contactor so as to locally perform a temperature of semiconductor wafer by supplying a fluid of a predetermined temperature to said fluid passage.

14. The contactor as claimed in claim 13, wherein said temperature control means includes a temperature sensor which detects a temperature of the fluid discharged from said fluid passage so as to control the temperature of the fluid supplied to said fluid passage based on an output of said

temperature sensor.

15. The contactor apparatus as claimed in claim 12, comprising a cassette attached to said semiconductor wafer, wherein said temperature control means has a medium passage provided to said cassette so as to control the temperature of said semiconductor wafer by causing a medium of a predetermined temperature flowing through said medium passage.

16. The contactor apparatus as claimed in claim 12, comprising a temperature control unit to which a cassette attached to said semiconductor wafer is removably attached, wherein said temperature control means has a medium passage provided to said temperature control unit so as to control the temperature of said semiconductor wafer by causing a medium of a predetermined temperature flowing through said medium passage.

17. A test method for testing a plurality of semiconductor devices formed on a semiconductor wafer, comprising;

a step of attaching said semiconductor wafer to a predetermined position of a cassette;

a step of placing and fixing a first contactor to said semiconductor wafer, the first contactor having contacts which are directly brought into contact with power supply terminals formed on the semiconductor devices of said semiconductor wafer;

a step of electrically connecting contacts of a second contactor to signal terminals formed on the semiconductor devices of said semiconductor wafer; and

a step of testing said semiconductor

devices by inputting signals to said semiconductor devices through said second contactor while supplying a power to said semiconductor devices through said first contactor so as to detect outputs corresponding to the signals.

18. The test method as claimed in claim 17, wherein the step of testing includes a step of sequentially testing said semiconductor devices while moving said second contactor.

19. The test method as claimed in claim 17 or 18, wherein the step of testing includes a step of performing a test while controlling a temperature of said semiconductor wafer through said second contactor.

20. The test method as claimed in claim 17 or 18, wherein the step of testing includes a step of performing a test while controlling a temperature of said semiconductor wafer through said cassette.